

## ABSTRACT

An error signal generation system and method for continuous and accurate positioning of  
5 a tunable element used in association with a coherent light source. A tunable element is  
positioned in a coherent light beam with a fixed frequency or wavelength,, and a detector  
is positioned in association with the light beam and tunable element that is capable of  
generating an error signal indicative of spatial losses associated with the positioning of  
the tunable element in the light beam. A tuning assembly is operatively coupled to the  
10 tunable element and detector and is configured to position the tunable element according  
to the error signal generated by the detector.